

**Testimony of
William M Gausman**

1 **DELMARVA POWER & LIGHT COMPANY**
2 **TESTIMONY OF WILLIAM M. GAUSMAN**
3 **BEFORE THE DELAWARE PUBLIC SERVICE COMMISSION**
4 **CONCERNING AN INCREASE IN ELECTRIC BASE RATES**
5 **DOCKET NO. 11-528**

6
7 **1. Q: Please state your name, position and business address.**

8 **A:** My name is William M. Gausman. I am Senior Vice President, Strategic
9 Initiatives for Pepco Holdings Inc. (PHI). I am testifying on behalf of Delmarva Power
10 and Light Company (Delmarva or the Company). My business address is 701 Ninth St.
11 N. W. Washington D.C. 20068.

12 **2. Q: What are your responsibilities in your role as senior vice president, strategic**
13 **initiatives?**

14 **A:** I am responsible for the oversight of strategic projects that focus on the long term
15 support of the transmission and distribution systems. This includes the implementation
16 of our Advanced Metering Infrastructure (AMI) and other PHI Blueprint for the Future
17 (Blueprint) initiatives, procurement of energy (both gas and electric), compliance with
18 the North American Electric Reliability Corporation (NERC) and state reliability
19 standards to ensure the safe and reliable operation of the electric system, and the
20 construction of the Mid-Atlantic Power Pathway Project (MAPP Project). I have in the
21 past been responsible for the engineering of all reliability programs and the design of all
22 assets that support the transmission and distribution of electric service across the service
23 areas of Delmarva Power & Light Company, Atlantic City Electric Company (ACE), and
24 Potomac Electric Power Company (Pepco).

1 3. Q: Could you please describe your educational and professional background and
2 experience?

3 A: I hold a Bachelor of Science degree in Electrical Engineering Technology from
4 Temple University. I joined Pepco in 1974 as a Project Engineer overseeing the
5 construction of high voltage transmission facilities. I have served in various management
6 positions within Pepco and PHI, with increasing responsibility for the operation,
7 maintenance and construction of both the transmission and distribution systems. From
8 1977 through 1988, I served as Superintendent of Underground Lines and as Manager of
9 Electric System Operation and Construction. In 1988 I was promoted to General
10 Manager - Power Delivery, and in 2001 became General Manager – Asset Management.
11 In 2002, I was named Vice President – Asset Management of Pepco. After Pepco's
12 merger with Conectiv, I became Vice President Asset Management over the combined
13 PHI organization. In 2008, I was promoted to Senior Vice President Asset Management
14 and Planning, and assumed my current position in October, 2010.

15 During my career with PHI, I also have served as an advisor to various industry
16 organizations including the Electric Power Research Institute Distribution Committee, the
17 Southeastern Electric Exchange (SEE) Executive Committee and the Edison Electric
18 Institute (EEI) Distribution Committee. I am currently a member of the Association of
19 Edison Illuminating Companies (AEIC) Electric Power Apparatus Committee and EEI
20 Transmission Executive Advisory Committee and a member of Leadership Greater
21 Washington.

1 4. Q: Have you previously testified before this commission?

2 A: Yes. I have testified before this Commission in the Company's most recent base
3 rate proceeding, Docket No. 09-414.

4 5. Q What is the purpose of your testimony?

5 A: The purpose of my testimony is to provide information supporting the Delmarva
6 construction program including our historical and planned investment in distribution
7 assets as discussed by Company Witness Kamerick. My testimony will consist of the
8 following items in which I will present information to support the Company's requests to:

- 9 • Have the Delmarva AMI project reflected in the Company's base rates and
10 begin recovery of the costs expended by the Company on that project in
11 accordance with Commission Docket No. 07-28, Order No. 7420.
- 12 • Approve certain ratemaking adjustments which concern the Delmarva
13 construction programs, including those that support the AMI project, as
14 shown in Company Witness Ziminsky's Direct Testimony.
- 15 • Approve the Reliability Investment Recovery Mechanism (RIM) plan
16 identifying the projects to be recovered through the RIM, required capital
17 expenditures, and the description of the process for the operation of the
18 RIM process.
- 19 • Obtain approval for the Reliability Plant Adjustment as presented in
20 Company Witness VonSteuben's Direct Testimony.

21 This testimony was prepared by me or under my direct supervision and control.

22 The source documents for my testimony are Company records, public documents, and my
23 personal knowledge and experience.

DELMARVA'S DELAWARE CONSTRUCTION PROGRAM

6. Q: Please describe Delmarva's Delaware construction program.

A: The Delmarva Delaware construction budget for calendar years 2011 and 2012 is \$130.9 million and \$195.2 million respectively. These investments exclude expenditures for the AMI program and the MAPP transmission project. The AMI project is covered in detail later in my Direct Testimony.

The Company's construction budget is composed of Distribution, Transmission and General/IT/Other categories and is shown in Table 1 for both 2011 and 2012.

**Delmarva Delaware
2011 and 2012 Construction Budgets
Dollars in Millions**

Table 1

Budget Category	2011	2012
Distribution	\$55.2	\$74.1
Transmission	\$44.6	\$90.9
General, IT and Other	\$31.1	\$30.3
Total	\$130.9	\$195.2

The 2011 and 2012 distribution projects include investments that support the connection of new customers, projects that increase the reliability of the electric system and projects to accommodate increased load. These projects are further explained below.

7. Q: Please describe the scope of the distribution category in the construction budget.

A: The distribution category of the construction budget is composed of three areas of work, grouped on a functional basis, as follows: Customer Driven, Reliability and Load. These categories are described in Table 2.

Distribution Construction Budget Categories

Table 2

Distribution Categories	General Scope of Work
Customer Driven	Projects required by customers, including connecting them to the distribution system and work performed at the direction of government agencies such as electric plant relocations that support highway construction projects.
Reliability	Projects to increase and maintain the reliability of the distribution system and electric facilities that provide service to our customers. These projects include replacement of existing infrastructure, upgrades to reduce outages and improve system performance and cost of emergency replacement of failed equipment during storms and other events.
Load	Load projects are proactive additions or upgrades to the system in order to meet all levels of load in advance of those load conditions developing on the system. Load projects assure that the system continues to meet design criteria.

8. **Q: Please discuss the historical trends in Delmarva's investment in distribution assets.**

A: Table 3 provides Delmarva's distribution asset investment from 2006 through 2010. This table excludes the cost of installing the AMI system across Delaware and shows that during that five year period the Company invested a total of \$224.7 million in its distribution system in order to meet customer growth and maintain a reliable electric system.

Delmarva Delaware
Historical Distribution Construction Costs
Dollars in Millions

Table 3

						Total 2006 - 2010
Distribution	2006	2007	2008	2009	2010	
Customer Driven	\$23.1	\$21.1	\$16.9	\$10.5	\$15.0	\$86.6
Reliability	\$14.6	\$16.7	\$21.5	\$25.9	\$28.7	\$107.4
Load	\$4.9	\$1.3	\$4.8	\$13.3	\$6.4	\$30.7
Total	\$42.6	\$39.1	\$43.2	\$49.7	\$50.1	\$224.7

The five year Customer Driven investment of \$86.6 million reflects the slowdown in the economy starting in 2008. The variation in the Load activities reflects the timing of the requirement to expand the existing infrastructure to supply projected load growth.

The Reliability and Load projects reflect the construction of assets designed to increase the reliability of the electric system and to serve the existing and developing load on the electric system. These projects include the annual work performed to improve the performance of the least performing feeders, replacement of underground cable that is nearing its end of life and other improvements to reduce customer outages and increase system performance. Load related projects include the upgrading of existing feeders to increase their load carrying capabilities, the construction of new feeders in areas of the system where customer growth is occurring and the installation of substation equipment to provide additional electric capacity. Recent Load projects have included the second 138/25 kV transformer at the Mount Pleasant substation serving New Castle County and installation of the 69/12 kV transformer at the Edgmore substation serving Wilmington.

1 9. Q: Please discuss the Delmarva 2011 construction budget, the 2012 construction
2 budget, and the 2013 through 2016 construction forecast.

3 A: The Delmarva 2011 and 2012 construction budgets and the 2013 through 2016
4 forecast are presented below in Table 4.

5 **Delmarva Delaware**
6 **2011 & 2012 Distribution Construction Budgets**
7 **and**
8 **Four Year Forecast 2013 – 2016**
9 **Dollars in Millions**

10 **Table 4**

Distribution	2011	2012	2013	2014	2015	2016	Total 2012 through 2016
Customer Driven	\$12.2	\$14.5	\$14.1	\$16.6	\$16.5	\$16.8	\$78.5
Reliability	\$41.7	\$56.7	\$63.5	\$55.4	\$54.7	\$55.9	\$286.2
Load	\$1.3	\$2.9	\$2.0	\$4.1	\$6.2	\$13.1	\$28.3
Total	\$55.2	\$74.1	\$79.6	\$76.1	\$77.4	\$85.8	\$393.0

11
12 The five year construction plan, 2012 through 2016, is \$393.0 million. This
13 represents an increase of \$168.3 million or 75% above the investments made in 2006
14 through 2010¹. Reliability investments are planned to increase by about 166% in the 5
15 years 2012-2016 as compared to the five years 2006-2010. This increase in investment in
16 the reliability of the Delmarva distribution system that began in 2011 is made in order to
17 continue to provide safe and reliable electric distribution service to its customers and to
18 maintain the Company's long term commitment to support the growth and development
19 of its service area. The increased reliability investments will replace additional URD

¹ The AMI project costs are excluded from this calculation in order to compare the previous and planned investments in the recurring distribution plant categories Customer Driven, Reliability and Load.

1 cable, upgrade feeders that are experiencing increased outages and install distribution
2 automation devices that will reduce the duration of outages once they occur.

3 The Load category of the 2012-2016 plan reflects the low growth forecast in the
4 current period which indicates that new infrastructure is not needed to expand the
5 distribution system during the early years of the plan. The increase in load related assets
6 in 2016 is to support the planned need for increased electric capacity in the Magnolia area
7 with the installation of a new distribution substation.

8 **DELMARVA'S ADVANCED METERING INFRASTRUCTURE**

9 **10. Q: Please describe the regulatory proceedings in which the Commission has addressed**
10 **the Company's AMI program.**

11 A: On February 6, 2007, the Company filed its Blueprint for the Future plan with the
12 Commission. The Blueprint plan included a proposed AMI program. On August 29,
13 2007, the Company filed its AMI Business Case in Docket No. 07-28. A workshop
14 regarding the AMI Business Case was held September 5, 2007 at the Company's office in
15 Newark, Delaware.

16 In Docket No. 07-28, Order No. 7420 was issued on September 16, 2008 in which
17 the Commission approved "...the diffusion of the advanced metering technology into the
18 electric distribution system network..."² Also in Order No. 7420, the Commission
19 permitted Delmarva to establish a regulatory asset consistent with the matching principle
20 giving consideration to both costs and savings associated with the deployment of AMI in
21 the Company's next base rate proceeding.³

² Docket No. 07-28, Order No. 7420, Attachment A, at Page No.25.

³ Id. at Page 26.

1 The next base rate proceeding was Docket No. 09-414. In that Docket's Order
2 No. 8011 issued August 9, 2011, the Commission approved the amortization over 15
3 years of the Company's regulatory asset for costs associated with AMI in the amount of
4 \$1,047,163 with the unamortized balance to be included in rate base.⁴

5 **11. Q: Has Delmarva carried out the Commission's directive to install an advanced**
6 **metering system?**

7 **A:** Yes. Delmarva has substantially implemented AMI for its electric customers in
8 Delaware. As of October 31, 2011, the Company has installed 308,068 electric meters
9 which represents 99% of the total electric meters in the program. As of October 31,
10 2011, the Company has activated 293,362 electric meters. Activation of the meters
11 means that the meters are capable of delivering meter readings wirelessly, reporting daily
12 and hourly electricity usage, bill to date and projected month end bills to customers on
13 the Company's web site, reporting power outages to the Company's outage management
14 system and enabling authorized Company personnel to remotely verify the presence of
15 voltage at the meter. The activated meters are providing the expected operational savings
16 to the Company and these savings have been recorded as reductions to the regulatory
17 asset in accordance with the matching principle. In October 2011 the Company placed
18 into service the information technology systems required to enable the proposed dynamic
19 pricing program, using the critical peak rebate design.

⁴ Docket No. 09-414, Order No. 8011 at Page 80.

1 **12. Q: Why is the Company seeking cost recovery for AMI in this base rate proceeding?**

2 **A:** It is appropriate to include the costs of the AMI program in the Company's rate
3 base and cost of service in this proceeding and to begin cost recovery for the following
4 reasons:

- 5 • The Company has complied with all of the Commission's Orders
6 concerning this program and has been meeting periodically with the Staff
7 of the Commission, the Division of Public Advocate, and the Department
8 of Natural Resources and Environmental Control to provide an ongoing
9 status of the AMI deployment;
- 10 • AMI meter installation is 99% complete as of October 31, 2011 with 95%
11 of the meters delivering benefits. The majority of the remaining meters are
12 expected to be installed and activated by the end of the test period in
13 December 2011 with perhaps a limited number of final installs carrying
14 over into 2012;
- 15 • The information technology systems are complete and operational. These
16 systems include the Meter Data Management System (MDMS), interfaces
17 to the billing system and external web site as well as interfaces for the
18 transfer of outage data to the Outage Management System. These systems
19 help to enable the O&M savings and other benefits for the customers;
- 20 • The Company is recognizing O&M savings in the regulatory asset and as
21 of September 30, 2011 \$1.3 million has been recorded as a reduction to
22 the regulatory asset.

- 1 • In the Hurricane Irene restoration process the Company used the AMI
2 system to assist in the restoration process by verifying the status of
3 outages at customers' premises thus avoiding calls back to customers or
4 truck rolls to the areas affected by the outages to verify the outage statuses
5 that are otherwise not detectable except by actual customer reports. These
6 functions contributed to the successful recovery and in shortening the
7 duration of customer interruptions.
- 8 • The Company has completed the modifications to its information
9 technology systems to enable implementation of the dynamic pricing
10 proposal contained in Docket No. 09-311, which is pending before the
11 Commission. Planning for the customer education aspects of the dynamic
12 pricing proposal is underway in anticipation of launching the first phase of
13 the dynamic pricing proposal in the first half of 2012;

14 13. Q: Briefly review the AMI system for which Delmarva is requesting base rate
15 treatment in this proceeding.

16 A: PHI conducted extensive reviews of AMI technology and after a competitive
17 selection process entered into agreements with a number of vendors to assist in deploying
18 AMI.

19 As an overview, PHI created a detailed set of functional requirement
20 specifications for the AMI system, to create a request for proposal (RFP) for the AMI
21 system, to develop and execute a detailed RFP response evaluation process, and to assist
22 with the selection of AMI vendors.

1 As a result of the bid evaluation process, PHI selected Silver Spring Networks
2 (SSN) to provide advanced networking products and services to help PHI build a Smart
3 Grid network. As stated in SSN's February 1, 2009 press release regarding its contract
4 with PHI,

5 "Silver Spring Networks creates the critical
6 networking infrastructure for the Smart Grid, known as a
7 Smart Energy Network. Based on the Internet Protocol (IP)
8 suite, it addresses the challenges of running multiple
9 applications and devices on a common networking
10 infrastructure using multiple transport technologies,
11 dramatically improving efficiency, lowering costs and
12 ensuring the reliable delivery of services. This smarter,
13 more efficient grid could cut the growth rate of worldwide
14 energy consumption by more than half over the next 15
15 years and drastically reduce carbon emissions."
16

17 The products procured from SSN consist of collector radios and signal repeater
18 devices that together with the electric meters will create a wireless mesh radio frequency
19 (RF) network. SSN also provides PHI's selected electric meter manufacturers, General
20 Electric (GE) and Landis+Gyr (L+G) with a Network Interface Card (NIC) that GE and
21 L+G install inside the meters during the production process. The NIC houses radios that
22 provide the wireless networking capability for PHI's AMI. Using the NIC, the meter has
23 the capability to communicate with the collector radio as well as the capability to
24 communicate with a customer's home area network (HAN). The customer's HAN could
25 include a device such as a programmable, controllable thermostat. SSN also supplies
26 software hosting services and later will provide a software license for its UtilityIQ™,
27 (UIQ) which is SSN's AMI Network Management application, when the Company brings
28 the application in-house. With regard to services, SSN provides communication network

1 design services, project management, field engineering services and information
2 technology support.

3 PHI awarded contracts to GE to procure its I-210+c and kV2c models of electric
4 meters and to L+G to procure its Focus AX-SD and S4e models of electric meters. Both
5 companies' meters include a remote service switch for premises served with 200 amperes
6 or less of power. The remote service switch enables the Company to remotely connect
7 and disconnect power.

8 PHI contracted for meter exchange services with Scope Services, LLC, a Woman
9 Owned Business Enterprise. Scope has been a contractor serving the Company's
10 affiliate, Pepco, for a number of years providing a variety of meter related services.

11 The contracts with these vendors were for initial installations in Delaware; however,
12 the contracts were structured to include all of PHI's operating utilities service territories,
13 including Pepco and Delmarva Maryland.

14 By structuring the contracts in this manner the Company was able to obtain pricing
15 benefits due to the increased scale of the orders and reduce the costs of integrating different
16 work management systems for meter deployment into the overall AMI system architecture.
17 Each vendor's pricing reflects the volume buying power of PHI across its combined
18 service territories, resulting in a lower price for the overall system than if it were
19 purchased solely for the Delmarva Delaware installation.

20 The AMI system is composed of electronic meters that include wireless
21 communications components to provide two way communications between the customer
22 and the Company. The communication system interfaces with the meter and delivers the
23 meter data to the Company for billing and customer energy usage presentation.

1 The MDMS and associated information technology (IT) capabilities provide the
2 ability to use the information received from the customer to validate the meter data and to
3 provide billing information to the customer billing system. This information is also used
4 in the web presentation of the customers' energy usage to help customers understand
5 their usage and better manage their overall energy use.

6 **14. Q: Please discuss the plant in service costs of the AMI project that the Company**
7 **requests be included in its base rates in this proceeding. How do the current costs**
8 **compare those that were included in the Company's AMI business case filed with**
9 **the Commission in August 2007?**

10 **A:** A summary comparison of the plant in service costs is shown below in Table 5

11 **Delmarva Delaware**
12 **AMI Component Cost Comparison**
13 **2007 Through 2011**

14 **Table 5**

Cost Area	2007 Business Case	Costs as Presented in the Revenue Requirement for this Case
Capital Cost	\$73.5 million	\$72.04 million

15
16 Company Witness Ziminsky presents the proposed ratemaking approach for these
17 costs and associated regulatory assets in his Direct Testimony and Schedules. It is also
18 important to note that these costs were identified in 2007 and have not been adjusted to
19 reflect current labor rates or other material price increases.

1 **15. Q: How does the AMI plant in service cost forecast compare to the cost information**
2 **that the Company presented in its AMI business case filed with the Commission in**
3 **August 2007?**

4 **A:** The plant in service costs of \$72.04 million are consistent with the Company's
5 forecasted AMI costs as presented in its August 2007 AMI Business Case at Page 8 at
6 \$73.5 million. Table 6 (below) compares the costs of the three component groups of the
7 AMI system at three points in the development of the Delmarva Delaware AMI program.

8 **Delmarva Delaware**
9 **AMI Component Cost Comparison**
10 **2007 Through 2011**
11 **Dollars in Thousands**
12

Table 6

AMI System Component	Plant in Service Forecast December 2011	Cost Forecast based on AMI Contracts August 2009	Original AMI Business Case August 2007
AMI Meters including Installation Costs	\$55,900	\$55,038	\$42,783
Communications Network including Installation Costs	\$4,552	\$ 5,171	\$21,616
AMI Network Management System, Meter Data Management System including System Integration Costs	\$11,533	\$13,287	\$ 4,417
Contingency	\$ -0-	\$ -0-	\$ 4,680
Total	\$71,9854	\$73,496	\$73,496

13
14 The original 2007 AMI Business Case was filed with the Commission in August
15 2007. The costs included in that plan are listed in the table above.

1 By August 2009 contracts had been awarded with the major suppliers of the AMI
2 system including meters, meter installation, communications network equipment and
3 installation, and system integration services. In 2009 the AMI project estimates were
4 revised to reflect the pricing contained in those contracts. Certain component costs
5 changed reflecting the developing market for AMI equipment.

6 For example, in the original 2007 AMI Business Case, it was assumed the
7 network interface cards in the meters were included in the communications network
8 costs. The procurement of these communications components was accomplished through
9 the AMI meters contract. This change is reflected in Table 6 in the revised 2009 estimate
10 that moves the cost of the communication card from the communication line to the meter
11 line item.

12 The total estimated project costs between the 2007 AMI business case and the
13 2009 contract cost update were unchanged. The project contingency was allocated as
14 appropriate among the three major components.

15 The Current Forecast of plant in service at December 2011 reflects the
16 Company's most recent estimate and is based upon the actual number of meters installed
17 and costs to construct the system and the remaining scope at October 30, 2011 with 99%
18 of the AMI meters installed and 95% in service and delivering benefit to customers.

19 **16. Q: What are the AMI program O&M savings and costs that the Company has included**
20 **in its revenue requirement in this proceeding?**

21 A: Company Witness Ziminsky's Direct Testimony describes the proposed
22 ratemaking approach to the AMI program savings and costs. The areas of O&M savings

1 and costs are the same areas as originally identified in the Company's AMI Business
2 Case in Docket No. 07-28.

3 **17. Q: Please review the Company's AMI project completion schedule.**

4 A: The AMI system will be in service by December 2011 except for two follow on
5 IT projects that will continue into 2012, as described below.

6 The first follow on IT project, the Enhanced Security for the Remote Service
7 Switch, is being incorporated in the work in order to provide the required cyber security
8 features to support the remote service switch capabilities. The remote switch capability
9 has not been activated but will be placed in service upon installation of the security
10 software and completion of field testing. This project is expected to be completed by the
11 third quarter of 2012.

12 The second follow on IT project, the migration of certain Commercial &
13 Industrial Accounts from MV-90 system to MDMS, is required to consolidate all the
14 Company's meter data into a single software application. This project is expected to be
15 completed by the third quarter of 2012.

16 **DELMARVA'S RELIABILITY INVESTMENT RECOVERY MECHANISM**

17 **18. Q: The Company has proposed the Reliability Investment Recovery Mechanism (RIM)**
18 **as part of this proceeding. Please describe the RIM, how the Company intends to**
19 **operate the RIM and what it is requesting this Commission to approve in this**
20 **proceeding.**

21 A: Company Witnesses Kamerick and Lowry have discussed the RIM in their Direct
22 Testimonies. The RIM is being proposed as a method to help reduce the impacts of
23 regulatory lag inherent in the traditional process of cost of service rate regulation during

1 times when slow growth in demand for electricity coincide with periods of increasing
2 demand for investment in the infrastructure of the electric distribution system and
3 significant efforts to increase the reliability of the system.

4 The Company has requested that the Commission approve the RIM process in
5 order to provide the initial recovery of the cost of distribution assets that do not give rise
6 to additional electric revenue and will improve the operation of the electric system.

7 Approval of the RIM will facilitate the Company's work to increase the scope and
8 impact of its reliability program which will prevent a deteriorating trend in performance
9 and result in the continuous improvement of overall electric service, reduce customer
10 outages and support the customer's increasing expectations for reliability performance.

11 The RIM process will not change the Company's normal construction budgeting
12 process. The Company will continue to perform its annual construction budgeting in
13 order to assure that the appropriate level of funding and projects are identified to support
14 the capital requirements of the distribution system. This annual review of required
15 activities will assure that the appropriate reliability projects, that will provide the greatest
16 reliability improvements, are incorporated into the RIM for the entire planning period.
17 This commitment to reliability is needed in order to continue to meet the expected level
18 of reliable service for our customers, and identify the appropriate funding for replacement
19 of existing infrastructure and meet the future growth requirements of the system.

20 The Company requests that the Commission implement the RIM by establishing
21 an annual process whereby discussions between the Commission Staff, interested parties
22 and the Company of the costs and benefits of reliability projects can be held. These

discussions will support and identify appropriate adjustments and help identify future projects to meet the expectation and guidance provided by the Staff and the Parties.

19. Q: The Company proposes to include in the RIM its planned distribution projects that support reliability, reliability related load projects and distribution infrastructure for which there is no automatic generation of new revenue. Please describe the categories of reliability work that will be included in the RIM.

A: The project categories that will be included in the RIM are shown in Table 7. These categories present the normal and ongoing scope of electric distribution reliability work. The projects that are included in these categories are based upon the general location of the work and the type of work involved. Multiple jobs are released within each project on an annual basis defining the specific location of the work such as the number of miles of primary feeder to be reconstructed along a highway in a specific county. Reliability work is of a continuing nature. These project categories are organized on a functional basis and presented in Table 7.

**Delmarva Delaware
RIM Project Categories**

Table 7

	RIM Project Categories	Reliability Project Scope of Work
1	Feeder Reliability Improvements	Reconstructing and replacement of distribution poles, conductor, supports, guys, insulators, lightning arrestors, switches and components of the overhead distribution line feeder system. Construction incorporates current designs and material specifications to increase reliability.
2	Planned URD Replacements	Underground Residential Distribution (URD) cables are replaced and brought up to current design and configuration that limits the extent of outages should the new system incur an outage.
3	Install Capacitors and Voltage Regulators	This equipment is installed in order to maintain the Commission required voltage levels on feeders due to the change in demand and operating conditions in the areas that they serve.
4	Distribution Automation	This area of work involves the installation of automatic and remotely operated devices on the overhead feeder system that allow for the reconfiguration of a feeder when a failure or other operating condition has occurred. These switching devices allow for an outage to be contained by rerouting electricity away from the failure which limits the number of customers affected and shortens the duration of an outage.

5	Replace Distribution Breakers	Breakers are electro-mechanical substation operating equipment. Breakers operate to control the flow of current between the distribution feeder and substation equipment such as power transformers and switch gear. They provide safety and the ability to protect and operate the distribution system.
6	Substation Enhancements to Increase Reliability	The preplanned replacement of substation power transformers, switch gear, battery installations, capacitors, etc. These components are replaced as they begin to reach the end of their expected useful operating life and demonstrate reduced operational performance.
7	Infrastructure Upgrades for Reliability	This project includes improvements and upgrades to individual components of the distribution system such as replacement of deteriorated poles, switches and other facilities needed on a spot basis to improve reliability. Included here are reconductoring of lines due to small wire size or poor operating performance, increased feeder tie lines and installation of tree wire where the tree canopy cannot be removed or trimmed.
8	System Spare Infrastructure for Reliability	Spare equipment such as system spare power transformers must be kept available for immediate delivery and installation if a failure occurs. Without spares there would be a prolonged outage for customers and reduction in overall reliability of the area. These items are long lead procurement items. System spares are needed to rapidly replace the failed units as a replacement cannot be procured in a timely manner.
9	Emergency Construction and Capital Storm Restoration Costs	Distribution plant must be replaced or repaired when it is damaged by vehicles, storms, or when the components fail in place. Failures are typically repaired by new construction of capital assets in order to reduce outage time and to bring the system up to design standards. Replacement is normally the least cost alternative to overcome the failure.

The RIM projects are grouped into these categories and presented in the schedule provided with my Direct Testimony marked as Schedule WMG-1, and entitled the “Reliability Investment Recovery Mechanism Plan”. This plan is based on the Company’s recently approved 2012 construction budget and four year forecast of planned construction expenditures as recently approved by the Company’s Board of Directors.

20. Q: Please discuss the projects and their descriptions that are included in the RIM.

A: The RIM plan includes a definition of the work that is included in each RIM project category and a list of projects that will be performed within each category. These projects are primarily for 2012. Specific, non-recurring projects may span several RIM project years.

The current year RIM projects will be further subdivided into the specific jobs or Work Requests (WR) as they are referred to in the Company’s Work Management

1 Information System (WMIS). Each WR that is a part of a RIM project in the current year
2 will be defined as that information becomes available. For example a Priority Feeder WR
3 will be identified with the feeder number, its location, approximate linear feet of feeder
4 rebuild and other information available from the design process such as number of poles
5 to be replaced, etc. There are always new WRs being developed through the engineering
6 and construction process. While there is some seasonality to the number of projects that
7 are defined at any one point, new WRs for projects that are identified within the RIM
8 project categories will continue to come forward and be identified and incorporated in the
9 RIM.

10 **21. Q: Is the RIM planned to be an annual process with updates to the projects being**
11 **performed each year?**

12 **A:** Yes. The RIM is intended to operate as an ongoing process with an annual filing
13 that will update the RIM for each successive year. This annual plan will update the
14 projects to be performed within each category and provide an explanation for any
15 changes, additions or deletion of projects identified in the previous year's plan. The
16 categories of work that are approved by the Commission within this case would remain
17 unchanged in future years. The annual filing will identify the projects to be included
18 within each category to reflect the specific activities to be performed each year and the
19 estimated cost for each project. The five year forecast included in the RIM plan identifies
20 the current 2012 budget and 2013-2016 capital expenditure forecast for the RIM project
21 categories, as identified within the Company's 2012 – 2016 capital plan, and the specific
22 work activities within each category of work for 2012.

1 22. Q: Please discuss why the Company's RIM is just and reasonable and the annual
2 process that the Company suggests be used to conduct that process.

3 A: The Company has proposed the RIM in order to help reduce the cost recovery lag
4 between when the Company makes an investment in reliability plant and when the costs
5 of that investment are included in rates.

6 The RIM represents a just and reasonable regulatory lag mitigation approach
7 because there is little risk associated with allowing initial cost recovery through the RIM
8 as the vast majority of the cost of these assets, which typically have a 30 year or longer
9 useful life, will not take place in advance of a fully litigated base rate case.

10 The Commission and Parties will have an ongoing knowledge of the core group
11 of projects that will be included annually in the RIM. Customer Driven, revenue
12 producing load projects and various IT related work will not be included in the RIM.
13 Specific projects such as the AMI project, which is a subject of this base rate case, will
14 not be included in the RIM.

15 The Company proposes that the initial RIM process along with the projects to be
16 included within the RIM, be determined as part of this base rate proceeding. Thereafter,
17 and on an annual basis in March, Delmarva would file its updated list of RIM projects for
18 the new year. The proposal to make this filing in March is appropriate and necessary as
19 the Company completes its annual budgeting process in January of each year.

20 The March filing date allows the Company to discuss with interested parties
21 planned work and receive guidance as to the projects that the Staff and Parties believe are
22 beneficial for the citizens of Delaware prior to the work being performed and prior to that
23 work being accepted into the RIM. This process benefits all parties in that the details of

1 the RIM projects and the majority of the individual jobs will be known and reviewed
2 prior to the filing of the RIM in March.

3 **23. Q: Please describe the type of information that the Company will share with the parties**
4 **and file with the Commission.**

5 **A:** The annual RIM filing will include a description of the majority of the work for
6 the year and include, on a WR by WR basis, the project number and name, work
7 description, general identification of the components to be included in the WR,
8 approximate quantities, cost estimates, job location, feeder number, etc. as that
9 information becomes available through the Company's engineering planning and design
10 processes.

11 Prior to the March filing, the Company will discuss with the parties the expected
12 timing for RIM work and the general reason why the Company has chosen a particular
13 job or project and the intended results when the project work is completed.⁵ The
14 Company proposes that the exact process and timing for discussions regarding the annual
15 RIM filing and how updates to the annual RIM plan would be made should be addressed
16 in a working group meeting held during this current proceeding.

17 The annual filing with the Commission will identify the components of work for
18 the year. The Company will also provide quarterly status updates during the year. The
19 RIM customer billing process will be based on the annual revenue requirement derived
20 using the total estimated RIM expenditures for the projects that are recommended to be
21 performed within the RIM during each 12 month period, January through December.

⁵ Specific reliability performance cannot be forecasted due to the unknown nature of events including weather, pole strikes, underground cable "dig-ins" etc.

1 The annual revenue requirement related to these expenditures will be recovered in
2 the 12 month period from April through March, assuming that this process is completed
3 by March of each year. The annual RIM report for the following period will include a
4 reconciliation of the actual billed amounts versus the revenue requirement calculated
5 using the actual costs incurred for RIM projects through the previous period. Any
6 differences will be carried forward and included in the calculation of the RIM for the
7 upcoming period. This reconciliation will adjust the following years RIM rate for both an
8 under collection as well as an over collection in the past year. All projects that are not
9 included within the RIM will be accepted into rate base at the time of the next base rate
10 proceeding.

11 The proposed RIM calculation is included in the Direct Testimony and proposed
12 Tariff of Company Witness Santacecilia.

13 **24. Q: Please review the benefits that will be achieved through a collaborative process with**
14 **the Commission Staff, the Parties and the Company.**

15 **A:** The Company proposes that as part of the annual RIM planning the Commission
16 support a working group in order for all parties to better understand the Company's
17 planning process and to provide a forum for the Commission and Parties to recommend
18 projects that may not have been included in the Company's RIM proposal.

19 The Company focuses on both system wide reliability goals, which will have the
20 greatest impact on overall system performance, as well as areas of the system where
21 customers are experiencing significantly more than the average number of outages. The
22 RIM process will allow interested parties to work with the Company to provide input and

1 guidance on projects being proposed by the Company and provide insight into other
2 projects of importance to the Staff, Parties and communities at large.

3 If the Parties wish to suggest that the Company provide additional focus on
4 individual improvement projects, different than the projects recommended by the
5 Company, the RIM process will allow for these discussions to take place and to develop
6 and refine selection criteria to address individual improvement projects appropriate for
7 specific locations.

8 Once this annual process is completed and the impact on the overall annual
9 funding requirements can be reviewed, the RIM process will provide a method to make
10 these changes and additions outside of a formal rate proceeding and within an ongoing
11 RIM process throughout the year.

12 Annually, a listing of projects to be included within the RIM will be filed with the
13 Commission so that all parties will have full visibility of the recommendations growing
14 out of the discussions with Parties or working groups.

15 The Company requests that the Commission approve the RIM proposal, including
16 the identification of the categories of work that are to be included within the RIM, as well
17 as the Company's request for the establishment of a working group that will discuss the
18 specific activities to be included within each RIM work category.

19 **25. Q: Company Witness VonSteuben has identified a rate making adjustment in his direct**
20 **testimony for annualization of the revenue requirements of reliability projects**
21 **closed to electric plant in the test year and in the first half of 2012, before the**
22 **beginning of rate effective period. Please describe this process in terms of the RIM**
23 **you have presented above.**

1 A: The reliability projects that are included in this adjustment are those that have
2 been completed and closed to the electric plant accounts in the test year or will be closed
3 to plant before the commencement of the rate effective period. These additions to electric
4 plant are in support of increasing the reliability performance of the distribution system
5 and produce no new electric revenue, and as such, support our request for annualization
6 of the revenue requirements associated with their completion.

7 The Commission has approved this same adjustment in the Company's previous
8 base rate case in Commission Docket No. 09-414. These projects are not included within
9 the proposed RIM and this adjustment is consistent with the requested approval of the
10 RIM.

11 **26. Q: Please reconcile this Reliability Plant adjustment with your request for the**
12 **Commission to approve the RIM for reliability projects.**

13 A: The Company has presented these two separate requests for reliability related
14 electric plant based on the normal workings of cost of service ratemaking. The Reliability
15 Plant adjustment is based upon the reliability plant closings in the test year and in the first
16 six months of 2012, in advance of the commencement of the rate effective period. The
17 RIM would become effective at the commencement of the rate effective period and
18 would cover the period going forward.

19 **27. Q: Does this complete your direct testimony?**

20 A: Yes, it does

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[illegible]

7	INFRASTRUCTURE UPGRADES FOR RELIABILITY									
	This project includes Improvements and upgrades to individual component of the distribution system such as replacement of deteriorated poles, switches and other facilities needed on a spot basis to improve reliability. Included here are reconductoring of lines due to small wire size or poor operating performance, increased feeder tie lines and installation of tree wire where the tree canopy cannot be removed or trimmed.									
UDLBRM4MM	Customer Reliability Improvement - Millsboro	\$207,430	\$225,003	\$228,128	\$231,332	\$237,116				
UDLBRM4MH	Avian Protection Improvement Millsboro	\$33,333	\$33,333	\$33,333	\$33,332	\$34,166				
UDLNRM4CR	Wilmington Network Upgrade	\$613,644	\$601,665	\$615,101	\$630,510	\$646,557				
UDLNRM4CU	Install Tree Wire/Spacer Cable - Christiana	\$0	\$0	\$492,565	\$492,389	\$492,367				
UDLNRM5BB	Brookside DE0222: Upgrade Feeder to Balance Load	\$325,989	\$0	\$0	\$0	\$0				
UDLNRM4CM	Customer Reliability Improvements-Christiana	\$465,783	\$477,252	\$489,836	\$500,629	\$514,426				
UDLNRM8SE	Christiana Distr.-Rebuild OH Rear Lot Dist. Sys	\$398,969	\$410,712	\$423,381	\$434,384	\$445,903				
UDLNRM4CH	Avaln Protection: Christiana	\$50,017	\$50,248	\$50,929	\$50,554	\$51,370				
UDLBRM4MA	Millsboro - Misc Dist Improvement Blanket	\$578,411	\$1,189,169	\$1,221,398	\$1,254,434	\$1,285,793				
UDLBRM4ME	Millsboro - Distribution Pole Repl	\$59,924	\$40,151	\$40,001	\$40,001	\$42,231				
UDLBRM4MJ	Millsboro District - Recloser Replacement	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000				
UDLNRM4CA	Misc Dist Improvement Blanket - Christiana	\$790,554	\$1,611,462	\$1,670,475	\$1,700,125	\$1,732,679				
UDLNRM4CJ	Christiana Distr- Replace Line Reclosers	\$500,782	\$500,091	\$500,264	\$501,565	\$500,746				
UDLNRM9SB	CH District Replace Steel Poles along 4th St. Wilm	\$571,324	\$587,639	\$600,181	\$0	\$0				
UDLNRM4CE	Christiana District-Distribution Pole Repl/Reinf	\$600,738	\$359,751	\$364,228	\$368,923	\$373,849				
	Total INFRASTRUCTURE UPGRADES FOR RELIABILITY	\$5,346,898	\$6,236,476	\$6,879,820	\$6,388,178	\$6,507,203				
8	SYSTEM SPARE INFRASTRUCTURE FOR RELIABILITY									
	Spare equipment such as system spare power transformers must be kept available for immediate delivery and installation if a failure occurs. Without spares there would be a prolonged outage for customers and reduction in overall reliability of the area. These items are long procurement items and a system spare is needed to replace the failed units as a replacement cannot be procured in a timely manner.									
UDSBRD8G	Bay Distribution - PHI Spare Transformers	\$1,129,930	\$392,126	\$0	\$0	\$0				
UDSBRD8G1	BAY - PHI Mobile Transformers	\$903,328	\$0	\$0	\$0	\$0				
UDSBRD8G2	Bay Region 69/25x12 40MVA Mobile Unit	\$314,722	\$889,956	\$0	\$0	\$0				
UDSBRD8G3	Bay Region Puchase Mobile Transformer 2011	\$940,820	\$0	\$0	\$0	\$0				
UDSNRD8G	New Castle - PHI Spare Transformers	\$1,196,456	\$1,211,790	\$1,782,328	\$1,299,830	\$1,521,645				
UDSNRD8G1	New Castle - Purchase 138/69-12kv Mobile Tr	\$312,617	\$827,478	\$1,326,821	\$0	\$0				
UDSNRD8GD	Christiana Substation Upgrade T2	\$1,038,677	\$0	\$0	\$0	\$0				
	Total SYSTEM SPARE INFRASTRUCTURE FOR RELIABILITY	\$5,836,549	\$3,321,349	\$3,109,149	\$1,299,830	\$1,521,645				
9	EMERGENCY REPAIRS TO INFRASTRUCTURE									
	Distribution plant must be replaced or repaired when it is damaged by vehicles, storms, or when the components fail in place. Failures are typically repaired by new construction of capital assets in order to reduce outage time and to bring the system up to design standards. Replacement is normally the least cost alternative to overcome the failure.									
UDLBRM3M1	Emergency Restoration Blanket - Millsboro	2,466,384	2,528,043	2,591,244	\$2,656,026	\$2,722,427				
UDLBRM4MC	Millsboro - Replace Deteriorated URD Cable	651,687	662,472	674,033	\$685,884	\$703,031				
UDSBRD71D	Bay Dist Substation Emergency - DE	112,708	116,050	120,464	\$123,810	\$128,224				
UDLNRM3C1	Emergency Restoration Blanket-Christiana	10,472,992	10,744,131	11,129,095	\$11,303,634	\$11,556,546				
UDLNRM4CC	Christiana - Replace Deteriorated URD Cable	936,780	951,016	980,132	\$1,007,488	\$1,040,176				
UDSNRD71D	NC DE: Dist Substation Emergency	247,710	250,989	254,264	\$257,538	\$260,813				
	Total SPCC Plans: Distribution Oil Circuit Breaker Replacement	\$14,888,261	\$15,252,701	\$15,749,232	\$16,034,380	\$16,411,217				
		\$55,307,923	\$64,005,578	\$55,661,009	\$55,252,052	\$56,476,896				